A Breeding Program for a Fall Lambing Program

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There are many advantages to lambing in October and November in Oklahoma. Small grain pastures can be utilized by the lactating ewes, which have lambed during the mild fall weather. There are no parasite problems for the growing lambs, and the lambs can be sold on the high April and May markets before the summer heat arrives. The only lambs that need to be carried through the summer are replacement ewe lambs.

To accomplish this program, a strict schedule of breeding and lambing activities is necessary. Only certain breeds and breed crosses can be utilized successfully, and an efficient lamb growing and finishing program is needed. The initial program can be successful and reasonably profitable, but the enterprise will become more efficient and profitable if a productive line of ewes is selected.

The purpose of this fact sheet is to suggest a breeding and lambing schedule and a flock management plan that incorporates successful management practices. Suggestions are also presented for a mating system and selection program to improve the productivity of the flock over time.

Breeding Schedule and Management Program

The suggested schedule is designed to have lambs born during October and November and clean-up lambing in January and early February. The actual breeding schedule is shown in Figure 1. It suggests a thirty-five to forty day mating season beginning about the middle of May and again around the 10th of August. These breeding periods result in two distinct lambing seasons with two groups of lambs born at different times and managed separately.

The spring breeding season should begin about May 10th. About 95 percent of those that conceive during the spring will do so within thirty-five days following a May 10th beginning date. The ewes estrus cycle is fourteen to seventeen days. Therefore, the thirty-five day season will allow two full heat cycles. Few ewes conceive between late June and early August, so it is poor use of time and labor to try to breed during this period. If cleanup rams are put with the flock about the 10th of August and left for thirty-five to forty days, lambs will be born between the 2nd of January and 20th of February.

Lambs born during these two lambing periods can be fed and managed in such a way that they can be marketed between March and June. This permits the majority of them to be sold during the period of highest prices and permits the last of the lambs to be sold before the summer heat creates problems.

Schedule 1 suggests monthly considerations of the management in the breeding flock to fulfill the breeding schedule. It also explains proper lamb management needed to grow lambs out for marketing during the prescribed time of year.

The lambing schedule and management program start in March. This is when producers planning to

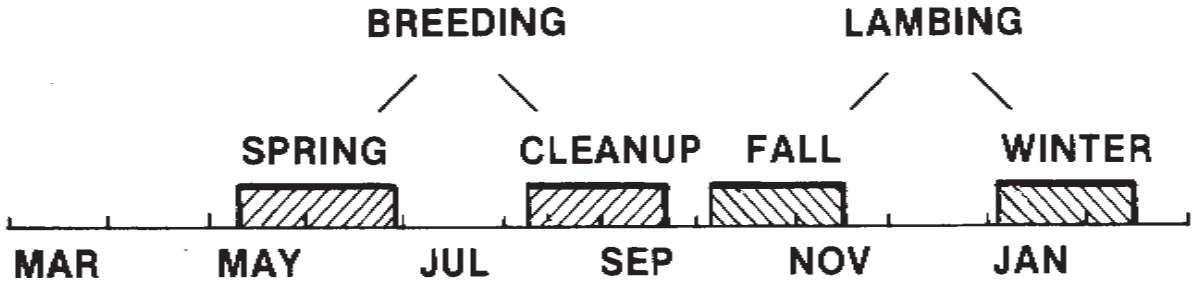

Figure 1. The breeding-lambing schedule.

Schedule 1. A fall-winter lambing schedule and management program.

Month	*Breeding Flock*	*Lambs*
March	Examine ewes' condition. Analyze ram supply situation. Fertility test rams.	Market some fall-born lambs. Push winter born lambs. Select fall born replacement ewe lambs.
April	Condition ewes and rams for breeding. Shear Analyze parasite situation.	Market fall-born lambs and some winter born lambs. Keep lambs off permanent pasture Wean winter born lambs by 10th.
May	Tease ewes? Start breeding about 10th. Observe breeding flock.	Continue lamb marketing. Shear lambs that weigh less than 80 lbs. about May 1st.
June	Remove rams after 35-40 days. Monitor parasite situation.	Complete lamb marketing if possible.
July	Maintain ewes. Keep rams from excessive heat. Monitor parasite situation.	If lambs not sold, self-feed in cool place and sell fat at 110-120 lbs.
August	Start cleanup breeding with blackfaced rams about 10th.	
September	Check condition of fall lambing ewes and start feeding .5 lb. grain daily. Remove rams after 35-40 days.	
October	Condition ewes for lambing. Prepare for lambs by 5th to 10th. Monitor parasite situation. Identify problem ewes.	Think about creep feeding lambs. Prepare to dock and castrate (?) lambs. Identify twin born ewe lambs.
November	Complete fall lambing. Identify ewes losing or not rearing lambs.	Creep feed lambs if pasture not excellent.
December	Start conditioning winter lambing ewes.	Keep fall lambs gaining rapidly.
January	Prepare for lambs by 5th Feed winter lambing ewes well. Wean fall born lambs.	Prepare to creep feed winter born lambs. Fall born lambs can be weaned if they are eating creep feed well
February	Complete lambing by 15th. Identify ewes not lambing fall or winter. Feed fall lambing ewes adequately.	Creep feed winter born lambs. Dock winter born lambs.

breed their ewes in May should start making plans for that breeding season. In order to breed efficiently in May and June, ewes need to be in average or slightly above average condition at the beginning of the breeding season. (Ewes should score between 3- and 3+ on a scale of 1 to 5, where 1 represents thin ewes).

Preparing for the breeding season also involves examining the ram supply. Rams to be used during the middle of May should be purchased in March or early April. This permits time to bring the rams to the farm, put them through an isolation period for health reasons, check them for fertility, and get them in the proper physical condition for breeding. A breeding soundness examination is recommended. This examination checks the ram for physical soundness, along with a complete semen evaluation.

The breeding season should start between the 10th and 15th of May in most parts of Oklahoma. If it is desired for the ewes to breed rapidly at the beginning of the breeding season, they may be teased two weeks prior to the breeding season. This can be accomplished by placing one or two vasectomized rams with the flock

or by penning the ewes next to rams each night for the same two-week period. Usually, this will increase the percentage of the ewes that conceive during the first three weeks of the breeding season but will not increase the total number of lambs born during the fall period.

The breeding flock should be observed during the first week or ten days of the breeding season for a few minutes each day to assure that things are normal. It is usually expected that about 5 or 6 percent of the ewes in the flock should be in heat on any given day. If this seems to be the frequency of the ewes in heat and if the rams appear to be mating normally, a satisfactory breeding season is indicated. As suggested earlier, most of the ewes that are going to become pregnant in May and June will be pregnant after about thirty-five days. It is more efficient to remove the rams at this time and keep them out until the middle of August. Producers should use some kind of a marking device on the rams so each ewe that is mated can be identified. The ewes at the end of the spring breeding season that will be most likely to lamb during the fall should be separated about a month before fall lambing.

This discussion has assumed that the producer wants to get all the fall born lambs possible. Some producers may want to have about half of their ewes lamb during the fall and the other half lamb in January and February. This can be accomplished by using marking devices on the rams and stopping the spring breeding after about 60 percent of the ewes have mated.

The ewes that have been mated during the May-June breeding period should be managed during late June and July to maintain their weight. The ewes that are to be mated during the cleanup breeding period need to be in average condition about the middle of August. The rams that are to be used during the August-September breeding period need to be maintained during the summer in an environment where they will not be subjected to excessive heat. They should be in slightly better than average condition (score 3 to 3+) at the start of the August breeding period.

The cleanup breeding period season should begin about August 10th. The group of ewes that were mated in the spring will contain some ewes that are not pregnant and will need to be exposed to enough rams to breed those ewes. (Note: Some ewes that are pregnant from spring breeding will accept the ram during the cleanup breeding season as if they are open). Those ewes that did not mate during the spring should be exposed to rams at the rate of one ram per thirty to fifty ewes depending on the age of the ram. The cleanup breeding season of thirty-five to forty days is suggested because the conception rate is not extremely high in late August and September. Many ewes will cycle back for a second mating period during the second seventeen days of the breeding period due to the August heat in Oklahoma.

During September, the ewes that will lamb during the fall need to be checked for condition. Seventy percent of the lamb growth occurs in the last four to six weeks of gestation; therefore, the fall lambing ewes need to be put on a higher plane of nutrition. They need to be given about 1/2 pound to 1 pound of grain per day to prevent ketosis (pregnancy disease) during the four weeks before lambing.

If a normal breeding situation occurred in May and June, the lambs will start coming about the 2nd of October and will continue for the length of the breeding season. As lambing progresses, a separate flock of lactating ewes should develop and a feeding program to adequately nourish the ewes should begin. Lactating ewes need a high quality feed supply and almost twice as much feed if there are many twins being raised as compared to when they are dry. The ewes that should start lambing in January should be on a diet slightly above maintenance until early December. They do not need the extra feed associated with the lambing or lactating flock.

During December, it is important to examine the ewes that will lamb in January and start conditioning them. These ewes will start lambing about January 2nd and need to be in an average or better condition so they get their lambs off to a good start. The winter lambing ewes should be completed by the 15th or 20th of February. Ewes that have not lambed during either the fall or winter should be identified and culled. Ewes that lamb in January and February produce lambs that must gain at a maximum rate from the time they are born until they go to market in May and June. This suggests that it is necessary to feed the ewes well and get the lambs started on creep feed promptly.

As of January 1st, the lambs that were born during October and November average an age of two months. Producers should realize that ewes will lactate well for six to eight weeks after lambing, but milk production decreases rapidly after sixty days of lactation. If there is a shortage of feed, it may be advisable to wean these lambs at this time and “rough” the ewes until March. Weaning the lambs at this age is a satisfactory procedure if the lambs have been on an adequate creep feed and are eating well.

The ewes that lambed in January and February should continue to nurse their lambs until at least late March or early April if there is adequate ewe feed available. The winter born lambs will reach market weight about two weeks sooner than fall born lambs when given the same opportunity due to better feed conditions. This will be discussed in more detail later.

Lamb Management

Most of the discussion up to this point has involved management of the ewes relative to breeding, lambing, and weaning. This discussion of lamb management will begin with the month of October, when the first lambs from spring breeding are born.

Under most conditions, it is more efficient to have lambs gain near their maximum ability from the time they are born until they are sold for slaughter. A possible exception to this is lambs born during the fall when the producer has a bountiful supply of wheat pasture. Because the pasture is cheap and because the ideal marketing time for the lambs may be in mid-March through mid-May, it is not necessary for these lambs to gain extremely fast. Therefore, different producers may make different decisions relative to creep feeding fall born lambs. The decision may vary from year to year depending upon feed supplies.

If it is anticipated that there may be a shortage of ewe feed by the time the lambs get two or three months of age, it is recommended to start them on creep feed when they are about ten days old. After weaning, they can be self-fed while they are grazing wheat pasture. This will cause them to reach market weight slightly earlier than they might have if they were not creep-fed. Since the lambs are extremely efficient when they are young, this is not a major cost and it is more important for the lambs to get to market in choice condition than it is to save money by inadequate feeding.

There are certain management procedures that need to be accomplished at lambing time. All lambs should be docked when they are extremely young.

The group of lambs born in the fall should be managed separately until they go to market. As indicated earlier, a decision will need to be made as to what time they should be weaned. They can be weaned at two months of age very satisfactorily if they are on creep feed, and they can be self-fed on pasture if a fast rate of gain is desired.

The winter born lambs have about four or five months to reach market weight if they are to be sold before the summer heat. It is therefore necessary that these lambs be put on creep feed when they are ten days old and pushed to gain at near their maximum rate until they are sold for slaughter. Depending upon the feed supply, these lambs may be weaned at any time between forty-five and seventy-five days of age. If small grain pasture or grass will be utilized by these lambs, they should also be creep-fed or self-fed a well balanced ration.

All of these lambs should be marketed while they are young and in choice condition. It is important that they be kept healthy and gaining rapidly from birth to market. When the pasture available for ewes and lambs is small grain pasture, a parasite problem will not occur if lambs are allowed to graze these pastures with their mothers. Producers who try to use spring permanent pastures for their winter lambing ewes and lambs during March and April will have trouble because the lambs will pick up parasites from these pastures. It is strongly recommended that the winter born lambs never be allowed on permanent pastures. By putting a cutting chute in the gate leading from the corral, you can allow the ewes to go out and graze such permanent pastures and keep the lambs in the lot where they will not pick up parasites.

The fall born lambs that are creep-fed should start going to market in March. Marketing of lambs as they reach a desirable market weight should be a priority. During the period from March through May, it may be that lamb buyers do not want lambs that weigh more than 110 to 120 pounds. If this is the case, lambs should be sorted off as they reach this maximum weight and sold.

If for some reason producers have a group of lambs in May that weigh less than 80 pounds, it is recommended that the lambs be shorn, put in a feedlot and full-fed for market during the early summer. This can be done if cheap feed resources are available, or these lambs can be sold as feeder lambs. There is little or no profit in any commercial lambs which are allowed to graze with their mothers on pasture during the summer in Oklahoma with the idea of finishing them for market during the fall.

Lambs are extremely efficient converters of feed to gain when they are young. In order to cash in on this, producers must be careful of feed and management practices. Lambs need a high quality ration of 16 percent crude protein to supplement their mother's milk until weaning. Then it may be reduced to 14 percent after the lambs reach sixty days of age. A fast rate of gain is important, but efforts to achieve the fastest possible rate of gain may not be practical. Lambs should be managed so that from the time they start eating, they stay in familiar surroundings, they are never hungry and any ration changes are gradual. Clean, fresh feed and a clean, unfrozen water supply are important to lamb health and performance.

The Breeds and Breeding Program

There is no existing breed of sheep that shows a high reproductive rate on the program suggested here. It is therefore necessary to start with the best breed or cross breed available and improve the flock over time by selection. A second important consideration involved in making these plans is, when possible, it is better to produce and sell crossbred lambs rather than straightbreds. Crossbred lambs have a higher livability and a faster rate of gain.

Table 1 presents some data suggesting the usual reproductive rate of three kinds of sheep when lambed during the fall and January and February. It is obvious that straight Rambouillet ewes are not as productive as the crossbred ewes during either period. However, some producers have utilized the Rambouillet as their ewe flock. They are giving up some of the lambing percentage, but the finer fleeces on the Rambouillet may make up the difference in some years. A higher percentage of the Dorset X Rambouillet crossbred

ewes will lamb during the fall. The 1/4 Finn, 1/4 Dorset, 1/2 Rambouillet ewes produce more twins, but not as many of them will lamb during the fall as the Dorset X Rambouillet.

It is suggested that producers who want most of their lambs to be born during the fall should start with Dorset X Rambouillet ewes. Producers, who are willing to accept about half of their lambs born in October and November and the other half born in January and February, will have a higher reproductive rate in their flock if they start with the 1/4 Finn, 1/4 Dorset, 1/2 Rambouillet ewes. Any of these kinds of ewes, if subjected to the selection program recommended later in this publication, will show an improvement in reproductive rate over a period of time if the selection procedures are used continuously.

The Mating Plan

It is extremely important that greater flexibility in lambing time be incorporated in sheep by developing flocks that will more nearly produce at the desired rate at the desired time. This mating plan outlines procedures for breeders to use to develop more flexible and more productive flocks. It suggests the use of two kinds of rams. The first kind will be of the same breeding as the ewe flock and selected for their fertility out of season and on a record of high prolificacy in their parents. The most productive ewes in the flock should be mated to these rams so excellent replacement ewes can be raised each year.

Producers who know which ewes are most productive can separate those ewes out for mating to these rams. For those producers who do not have any records of which ewes are most productive, it is suggested that the entire flock of ewes be exposed to these rams at the beginning of the spring breeding period. Those ewes which are fertile at this time will be the ones that settle and lamb first during the fall. Experience shows that many of the more prolific ewes lamb early in the lambing season. This permits the ewes that lamb at the desired time and produce twins to be identified by some type of ear mark or with permanent ear tags. This procedure assures that the ewe lambs produced by the sires used first are from some of the more fertile and prolific ewes in the flock. About two years of permanently identifying the ewes that lamb first and produce twins will give the producer a basis for separating out the best ewes for producing replacements.

Table 1. Fertility and prolificacy of some breeds and breed crosses when lambing in the fall vs. the winter.

	Fall		*Winter*	
Kind of ewe	*Fertility*[1]	*Prolif.*[2]	*Fertility*	*Prolif.*
Rambouillet	75-85	1.2-1.4	90-95	1.4-1.5
Dorset x Rambouillet	85-95	1.3-1.5	92-100	1.6-1.8
1/4 Finn, 1/4 Dor, 1/2 Ramb	60-70	1.4-1.6	91-100	1.7-2.0

[1]Percent ewes lambing in 40 days.
[2]Lambs born per ewe lambing.

Producers will need to make an estimation of how many ewe lamb replacements they need each year. Then they should plan to mate enough ewes to this kind of ram to produce about 30 or 40 percent more ewe lambs than they actually want to go into their flocks annually. The rest of the ewe flock should be mated to blackface rams to produce crossbred market lambs. Hampshire, Suffolk, or good Hampshire X Suffolk crossbred rams will work very well for this purpose.

This system assures that the early-born fall lambs will be white-faced lambs out of a ram from which one wants to keep replacements. Later fall-born lambs and all January-February born lambs should be out of blackfaced rams. Since these rams are siring slaughter lambs, they should be selected for excellent body conformation and growth. Lambs sired by blackfaced rams will gain faster and will catch up with the older white-faced lambs, thus allowing for marketing close to the time as the white faces.

Selection Program

In order to improve the flock over time, it is important to make some wise decisions relative to (1) which ewes are used to produce replacements; (2) which ewe lambs born are to be kept as potential replacements; (3) which ewe lambs that are kept eventually get into the breeding flock and (4) which ewes to cull.

As indicated earlier the first decision is which ewes are mated to the rams to produce replacements. For those producers who have production records on their flock, it is possible to separate the best ewes out and mate them to the desired ram. As indicated earlier, for those producers who do not have such records, it is possible to make some progress and create some records by mating the entire flock to these rams early in the spring season and then identifying at lambing time in the fall those ewes which lamb at the desired time and produce twins. If one had about 1/3 of his most productive ewes identified for mating to these rams, sufficient ewe lambs should be produced to meet usual replacement needs.

If this plan is followed, the white-faced ewe lambs born in the fall would be candidates for replacement purposes. It is extremely important during the fall lambing period to permanently identify all twin or triplet ewe lambs born and also give a special identification to any ewe lambs born to ewes that are known to be well above average in productivity. These are the lambs that should get special consideration about weaning time when the final decision is made on which ewe lambs to save as replacements.

At about 75 pounds live weight, the ewe lambs should be examined and decisions made as to which are kept for replacements. It is necessary to keep in mind that at this approximate weight, single born and reared ewe lambs will be about 10 pounds heavier than twin born lambs. The twin lambs need to get some special consideration, otherwise, one will be selecting against twinning. At this time, ewe lamb replacements are selected based on evaluation of adequate body conformation, soundness, wool quality, and other factors. It is recommended that about 25 to 30 percent more ewe lambs than are actually needed as replacements be separated out as prospects. These ewe lambs should be reared as a group and given the same opportunities for growth and development. The ewe lambs should weigh at least 100 pounds by the time breeding begins at seven months of age.

When the replacement ewe lambs are ten months old, they should be exposed to a ram from which replacements are raised so it can be determined which are fertile and ready to breed at that time.

On the basis of their lambing performance at fifteen months of age, it can be determined which ones are most fertile and prolific. Those are the ones that should eventually go into the flock. Those that lamb at fifteen months and produce twins are the best, and those producing single lambs at fifteen months are next. Those that do not lamb should be culled.

Ewes lambing at fifteen months of age should be permanently identified relative to their lambing performance. At this age, the best single indication as to what their future productivity is likely to be, can be determined by the producer. If the producer has started with 25 or 30 percent more ewe lambs than needed for the flock on a permanent basis, this proportion can be culled on the basis of reproductive performance at this first lambing opportunity. Those ewe lambs that lamb at fifteen months of age and produce twins are likely candidates to go into the special flock of best ewes to produce future replacements.

Records

The effectiveness of selection programs depends upon the accuracy of the records available. For producers who are willing and able to keep good production records on their flock, there is the opportunity to do the best job of selection. Producers who do not want to keep written records on individual ewes may still have a reasonably accurate method of making decisions about ewes by the use of permanent ear tags or ear notches to indicate special properties.

For many reasons it is important to know which ewes were born as twins or triplets. Therefore, a permanent identification of such ewe lambs at birth is a good idea. Of equal or greater importance is the knowledge that a ewe, at her first opportunity to lamb, produced and raised twins. This puts her in a very special category, and she should get some kind of permanent identification. Such ewes might be given an ear tag with a number so that individual records can be kept on them.

Another important kind of an identification is a permanent mark on a ewe indicating that she is undesirable and therefore, should be culled. Ewes that do not lamb after adequate opportunities or that refuse to raise their lambs are likely candidates for this classification. There are also other observations that producers make during the year suggesting that certain ewes do not belong in the flock on a permanent basis.

Summary

Oklahoma is located in an area where small grain pasture can be produced by many breeders and, unlike many areas of the United States, ewes will breed at other than the normal breeding time. This gives Oklahoma breeders an opportunity to produce lambs and sell them at a time when the market is 20 to 30 percent higher than the average for the year. In order to accomplish this successfully, it is necessary to have two lambing seasons. The first should be for about thirty-five to forty days in October and early November. The other should be for about thirty-five to forty days beginning the first of January and through early February. It is important to develop and keep rigid schedules of flock management in order to make this schedule work. It is also necessary to give special consideration to the management and feeding of lambs in order to get the lambs on the market at the time when the prices are the highest and to avoid the problems of summer heat and spring parasites.

Since there are no existing ewe breeds that are highly productive at these breeding and lambing times, it is necessary to create a flock that has a potential to be highly productive and in which there are individual ewes that are highly productive. By mating these highly productive ewes to the right kind of rams and saving replacements on an annual basis, over a period of time a flock can be developed that is highly productive and will do something that the rank and file of sheep flocks in the United States will not do.

If several producers adopt and follow this program for fifteen to twenty-five years, a source of genetic material that is very unique and highly valuable for commercial production will be developed.

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